Detailed Technical Specification for Reflective Jackets

1. Scope

This specification defines the requirements for Reflective Jackets designed to provide high visibility ensuring compliance with IS 15809:2017 or its latest version with all the amendments. These jackets are intended for BESCOM linemen to enhance visibility under all weather conditions and allow unrestricted movement.

2. Standards & Compliance

- The vest jackets should comply with Class 2 type 1 of the latest version of IS 15809:2017.

3. Material Requirements:

- 100% Polyester taffeta fabric in fluorescent yellow/green as per Type-1 of IS 15809.
- Minimum weight of 125 GSM ± 5%,

4. Design & Features

a. Vest Design

- The jacket should be sleeveless having front opening pattern in 'V' shaped neck design.
- The design should provide flexibility and high visibility as per Class 2 type 1 of the latest version of IS 15809:2017.

b. Reflective Material

- Reflective tape width: 50 mm, as per Class 2 requirements of IS 15809.
- Reflectivity levels under wet / rainwater conditions, as per IS 15809:
  - ≥500 cd/lux before washing.
  - ≥100 cd/lux after 50 washes.
- Taping format as per IS 15809:
  - Two vertical stripes of reflective tapes positioned on the shoulders.
  - One horizontal reflective bands positioned around the waist.
- Reflective tape material shall be made from non-hazardous glass beads.

d. Fasteners & Adjustments

- Front Closure: Heavy-duty polymeric zipper for secure fastening.

e. Branding & Marking

- BESCOM logo (4 x 3 inches) should be sublimated or screen-printed on the front chest area in peacock blue color.

- The BESCOM name should be provided on the back side using silver-grey heat-transferable reflective material, applied through thermal transfer or heat lamination with the following specifications:
    - Kannada letters " ಬೆಎಿಕಂ" positioned at the upper chest level of size 8 x 3 inches.
    - English letters **"BESCOM"** positioned below the horizontal reflective tape strip of size 11 x 3 inches.
- Labels for Brand Name, Size & Wash Care should be provided.

5. Sizes

Two sizes shall be provided and finalized at the time of the purchase order (PO) based on approved samples.

6. General Requirements

- The fabric should comply with IS 15809 Type 1 specifications.
- The vest should be designed to provide maximum visibility and durability.
- No hazardous materials should be used.

7. Type Tests and certification

Test reports from a Government NABL Accredited Lab should be furnished for the following:

1. Shell Fabric test report.
    - Material Identification (Polyester)
    - Fabric Colour as per IS 15809 Type 1 requirement
    - Tear Strength (Warp & Weft).
    - Tensile Strength (Warp & Weft).
    - Retroreflection after test exposure for following test as per IS 15809:2017
        - Abrasion
        - Flexing
        - Temperature variation
        - Washing
        - Dry-cleaning
        - Influence of rainfall

2. Reflective material testing for tapes and heat transfer materials :
    - Reflectivity levels under wet / rainwater conditions, as per IS 15809:
        1. ≥500 cd/lux before washing.
        2. ≥100 cd/lux after 50 washes.

8. Acceptance test requirement:

- Physical dimensions of sizes
- Dimensions of logo and branding
- Dimensions of reflective materials
- Verification of type test reports
- Material sourcing verification with the type test reports.
- 01 sample from each lot of material offered for inspection will be selected and sent to Textiles Committee Lab of GoI/ or any other testing lab recognized by Ministry of Textiles (GoI) to carry out the tests as specified under clause 7 "Type Tests and certification".

Sample Reference Images

Front View **Back View**

General Manager (Ele)
Quality Standards & Safety,
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